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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF Roger BIEL, et al Art Unit: N/A

APPLICATION NO: N/A

Examiner: N/A

FILED: October 22, 2001

FOR: Ultrasonic Device for Inspection

Assistant Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

In the claims:

Please amend the claims 1-19 as follows:

1. (once amended) An inspection device for examining ophthalmic lenses, comprising an ultrasonic processor (2) with a sonotrode (4) and a holding container (6) open at the top, wherein one or more ophthalmic lenses (5) are placed in the holding container which is filled with a test liquid, wherein the sonotrode (4) is immersed in the test liquid in the holding container (6), and wherein the ophthalmic lenses (5) are located in the holding container (6) are sonicated with ultrasound.
2. (once amended) An inspection device according to claim 1, wherein the ultrasonic processes emits ultrasonic power.
3. (once amended) An inspection device according to claim 2, wherein the ultrasonic power intensity lies in the range of 80-150 W/cm².

4. (once amended) An inspection device according to claim 1, wherein the holding container (6) is of cylindrical shape.
5. (once amended) An inspection device according to claim 1, wherein the ultrasonic processor (2) operates in a frequency range of 20 to 30 kHz.
6. (once amended) An inspection device according to claim 5, wherein the frequency lies in the range of 23 to 25 kHz.
7. (once amended) An inspection device according to claim 1, wherein the butt end of the sonotrode (4) has a diameter of 14 mm.
8. (once amended) An inspection device according to claim 1, wherein the holding container (6) is mounted on a spring-loaded holding plate (7).
9. (once amended) An inspection device according to claim 1, wherein the sonotrode (4) is surrounded by a sealing sleeve (8) which seals off the holding container during immersion of the sonotrode (4).
10. (once amended) A method of inspecting ophthalmic lenses for defects, comprising the steps of placing the ophthalmic lenses in a test liquid and exposing the ophthalmic lenses to an ultrasonic field.
11. (once amended) A method according to claim 10, wherein the ultrasonic field is an ultrasonic power field.
12. (once amended) A method according to claim 11, wherein the power intensity of the ultrasonic field lies in the range of 80 to 150 W/cm².
13. (once amended) A method according to claim 10, wherein an ultrasonic processor (2) with a sonotrode (4) is used to produce the ultrasonic field.
14. (once amended) A method according to claim 10, wherein a cylindrical holding container (6) is used to position the ophthalmic lenses in the test liquid.
15. (once amended) A method according to claim 10, wherein the frequency range is from 20 to 30 kHz.
16. (once amended) A method according to claim 15, wherein the frequency range is from 23 to 25 kHz.
17. (once amended) A method according to claim 13, wherein a sonotrode (4) with a butt end of 14 mm diameter is used.
18. (once amended) A method according to claim 13, wherein the sonotrode (4) is surrounded by a sealing sleeve (8) which seals off the holding container (6) during immersion of the sonotrode (4).

19. (once amended) A method according to claim 10, wherein ophthalmic lenses are soft contact lenses.

Please add claims 20-26 as follows:

20. An inspection device according to claim 1, wherein the ophthalmic lenses are contact lenses.

21. An inspection device of claim 3, wherein the ultrasonic power intensity lies in the range of 136-140 W/cm².

22. An inspection device according to claim 2, wherein the ultrasonic processor (2) operates in a frequency range of 20 to 30 kHz.

23. An inspection device according to claim 22, wherein the frequency lies in the range of 23 to 24 kHz.

24. A method of claim 10, wherein the ophthalmic lenses are contact lenses.

25. A method of claim 12, wherein the power intensity of the ultrasonic field is 138 W/cm².

26. A method of claim 12, wherein an ultrasonic processor (2) with a sonotrode (4) is used to produce the ultrasonic field.

In the Specification:

Page 1, between the first and second paragraphs, please insert --

BACKGROUND OF THE INVENTION --

Page 1, between the third and fourth paragraphs, please insert --

SUMMARY OF THE INVENTION --.

Page 2, between the third and fourth paragraphs, please insert –

BRIEF DESCRIPTION OF THE DRAWING --.

Page 2, between the fourth and fifth paragraphs, please insert –

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS --.

Page 2, please replace the fifth paragraph with the following paragraph:

The inspection device 1 illustrated schematically in fig. 1 consists of an ultrasonic processor 2, which is preferably fixed by a holder 3. The ultrasonic processor 2 has a rod-shaped sonotrode 4,

which emits the ultrasonic waves. The ultrasonic processor 2 is preferably a UIP 250 appliance from Hielscher. The operating frequency of this device is from about 20 to 30 kHz, preferably about 24 kHz \pm 1 kHz. It is, however, also conceivable to use other frequency ranges. The ultrasonic intensity is from about 80 to 150 W/cm², preferably about 138 W/cm² and the maximum amplitude is in the region of ca. 250 μ m. The butt end of the sonotrode 4 has a diameter of 14 mm. However, it is within the scope of the invention to use other devices with other parameters.

Remarks

The specification has been amended to include headings for different sections in accordance with the PTO's guidelines regarding the preferred layout and content for patent applications.

Support for the amendments of the fifth paragraph on page 2 can be found in the original claims on pages 4 and 5. Claims 5 and 15 states that the operating frequency of the ultrasonic processor (2) operates in a frequency range of 20 to 30 kHz. Claims 3 and 12 states that the ultrasonic power intensity lies in the range of 80-150 W/cm², especially 138 W/cm².

Version with Markings to Show Changes Made

In the claims:

1. (once amended) An i[!]npection device for examining ophthalmic lenses, [especially contact lenses, characterised by]comprising an ultrasonic processor (2) with a sonotrode (4) and a holding container (6) open at the top, [into which]wherein one or more [contact]ophthalmic lenses (5) [may be]are placed[,] in the holding container[,] which is filled with a test liquid, [whereby]wherein the sonotrode (4) [can be]is immersed in the test liquid in[to] the holding container (6), and wherein the [contact]ophthalmic lenses (5) are located in the holding container (6) are sonicated with ultrasound.
2. (once amended) An i[!]npection device according to claim 1, [whereby]wherein the ultrasonic processes emits ultrasonic power.
3. (once amended) An i[!]npection device according to claim 2, [whereby]wherein the ultrasonic power intensity lies in the range of 80-150 W/cm²[, especially 138 W/cm²].
4. (once amended) An i[!]npection device according to claim 1, [whereby]wherein the holding container (6) is of cylindrical shape.
5. (once amended) An i[!]npection device according to claim 1[or 2], [whereby]wherein the ultrasonic processor (2) operates in a frequency range of 20 to 30 kHz.
6. (once amended) An i[!]npection device according to claim 5, [whereby]wherein the frequency lies in the range of 23 to 25 [24] kHz[±1 kHz].
7. (once amended) An i[!]npection device according to claim 1, [whereby]wherein the butt and of the sonotrode (4) has a diameter of 14 mm.
8. (once amended) An i[!]npection device according to claim 1, [whereby]wherein the holding container (6) is mounted on a spring-loaded holding plate (7).
9. (once amended) An i[!]npection device according to claim 1, [whereby]wherein the sonotrode (4) is surrounded by a sealing sleeve (8)[,] which seals off the holding container during immersion of the sonotrode (4).
10. (once amended) A [M]ethod of inspecting ophthalmic lenses[, especially contact lenses,] for defects, [whereby the lenses are surrounded by a test liquid and exposed] comprising the steps of placing the ophthalmic lenses in a test liquid and exposing the ophthalmic lenses to an ultrasonic field.
11. (once amended) A [M]ethod according to claim 10, [whereby]wherein the ultrasonic field is an ultrasonic power field.

12. (once amended) A [M]method according to claim 11, [whereby]wherein the power intensity of the ultrasonic field lies in the range of 80 to 150 W/cm²[, especially 138 W/cm²].
13. (once amended) A [M]method according to claim 10 [or claim 12], [whereby]wherein an ultrasonic processor (2) with a sonotrode (4) is used to produce the ultrasonic field.
14. (once amended) A [M]method according to claim 10, [whereby]wherein a cylindrical holding container (6) is used to position the [contact]ophthalmic lenses in the test liquid.
15. (once amended) A [M]method according to claim 10, [whereby]wherein the frequency range is from 20 to 30 kHz.
16. (once amended) A [M]method according to claim 15, [whereby]wherein the frequency range is from 23 to 25 [24]kHz[± 1 kHz].
17. (once amended) A [M]method according to claim 13, [whereby]wherein a sonotrode (4) with a butt end of 14 mm diameter is used.
18. (once amended) A [M]method according to claim 13, [whereby]wherein the sonotrode (4) is surrounded by a sealing sleeve (8)[,] which seals off the holding container (6) during immersion of the sonotrode (4).
19. (once amended) A m[M]ethod according to claim 10, [whereby soft contact lenses are inspected]wherein ophthalmic lenses are soft contact lenses.

In the Specification:

Page 2, the fifth paragraph:

The inspection device 1 illustrated schematically in fig. 1 consists of an ultrasonic processor 2, which is preferably fixed by a holder 3. The ultrasonic processor 2 has a rod-shaped sonotrode 4, which emits the ultrasonic waves. The ultrasonic processor 2 is preferably a UIP 250 appliance from Hielscher. The operating frequency of this device is from about 20 to 30 kHz, preferably about 24 kHz ± 1 kHz. It is, however, also conceivable to use other frequency ranges. The [maximum] ultrasonic intensity is from about 80 to 150 W/cm², preferably about 138 W/cm² and the maximum amplitude is in the region of ca. 250 µm. The butt end of the sonotrode 4 has a diameter of 14 mm. However, it is within the scope of the invention to use other devices with other parameters.

Please address all correspondence to Thomas Hoxie, Novartis Corporation, Patent & Trademark Department, 564 Morris Ave., Summit, NJ 0790-1027. The Commissioner is hereby authorized to charge any other fees which may be required under 37 C.F.R. §§1.16 and 1.17, or credit any overpayment, to Deposit Account No. 19-0134.

Respectfully submitted,

Date: Oct. 22, 2001


Jian S. Zhou
Jian S. Zhou
Registration No. 41,422
(678) 415-4691

Novartis Corporation
Patent & Trademark Department
564 Morris Ave.
Summit, NJ 07901-1027